

Citation for published version:

Atkinson, M & Wade, TD 2019, Mindfulness Training to Facilitate Positive Body Image and Embodiment. in T Tylka & N Piran (eds), *Handbook of Positive Body Image and Embodiment: Constructs, Protective Factors, and Interventions*. Oxford University Press, Oxford, U. K., pp. 312-325. <https://doi.org/10.1093/med-psych/9780190841874.001.0001>, <https://doi.org/10.1093/med-psych/9780190841874.003.0030>

DOI:

[10.1093/med-psych/9780190841874.001.0001](https://doi.org/10.1093/med-psych/9780190841874.001.0001)
[10.1093/med-psych/9780190841874.003.0030](https://doi.org/10.1093/med-psych/9780190841874.003.0030)

Publication date:

2019

Document Version

Peer reviewed version

[Link to publication](#)

This is a draft of a chapter that has been accepted for publication by Oxford University Press in the forthcoming book *Handbook of Positive Body Image and Embodiment* edited by Tracy L. Tylka and Niva Piran due for publication on 16 May 2019.

University of Bath

Alternative formats

If you require this document in an alternative format, please contact:
openaccess@bath.ac.uk

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Mindfulness Training

Melissa J. Atkinson and Tracey D. Wade

Mindfulness is defined as “the awareness that emerges through paying attention on purpose, in the present moment, and non-judgementally to the unfolding of experience moment by moment” (Kabat-Zinn, 2003, p. 145). Practicing mindfulness fosters a capacity to acknowledge and observe one’s experiences (including thoughts, emotions, sensations, and urges) as they ebb and flow, without judgement and criticism, or efforts to avoid, ruminate, problem-solve, or otherwise direct them. It is intended to facilitate a full appreciation and welcoming of one’s experience, both positive and negative, and encourage flexibility and non-reactivity in one’s responses. Mindfulness can be conceptualised as a trait, state, or skill; can be cultivated through various formal and informal training and practice exercises; and is associated with a growing evidence-base as a useful approach across multiple disorders (Keng, Smoski, & Robins, 2011).

Regarding the body more specifically, mindfulness represents a recent approach that has been applied to body image concerns and negative affect – two constructs that are associated with negative impacts on mental and physical health, and are established risk factors in the development of eating disorders (Jacobi & Fittig, 2010). As a therapeutic technique, mindfulness is said to alter one’s relationship with negative experience (Teasdale, Segal, & Williams, 1995), and has been conceptualised as an emotion regulation skill (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Thus, in the context of body image, mindfulness aims to facilitate a more adaptive response to unpleasant, unwanted, and sometimes unavoidable negative experiences related to the body and appearance (e.g., sociocultural pressures to be thin, appearance-related teasing or criticism, unfavourable social comparisons, negative self-evaluations, body dissatisfaction, depression, anxiety, urges to engage in weight control practices).

Mindfulness has the potential for a two-pronged approach to building positive body image and embodiment. First, it aims to encourage an increased sense of appreciation and attunement (e.g., being aware and present in the body, perhaps noticing positive aspects previously avoided or neglected) and psychological flexibility (e.g., capacity to refrain from automatic negative reactions when confronted with socially prescribed appearance ideals and pressures); see also Chapters 4 and 6. Second, mindfulness may help to reduce the intensity and impact of negative experiences that do occur (e.g., dissatisfaction, disgust, distress, shame, depression, anxiety).

This chapter reviews how mindfulness may be of benefit in promoting positive body image and embodiment (including theorised processes and mechanisms of action), outlines key components of existing mindfulness-based body image intervention approaches and evidence of their efficacy, and concludes with important considerations for current practice and future development. As a caveat, we note that our chapter predominantly describes work related to reducing negative body image experiences and disordered eating, as research exploring the capacity for mindfulness to specifically impact positive body image and embodiment is still in its infancy.

<1>Proposed Mechanisms of Action Regarding the Body

There have been various mechanisms proposed for how mindfulness may produce benefit generally, including processes of increased mindful awareness, attention regulation, meta-awareness and cognitive defusion/decentring, emotion regulation, exposure, and changing perspective of the self (for reviews, see Baer, 2003; Keng et al., 2011; Chapters 4 and 26). With specific regard to body image, mindfulness may work via three proposed pathways. First, mindfulness encourages a non-critical and compassionate view of the self and body via the practice of non-judgemental awareness and acceptance, which is particularly salient for body image disturbances involving negative self-evaluation as a core component.

Second, mindfulness enables an ability to detach or distance (decentre) oneself from distressing thoughts and feelings arising from body and eating related triggers, thereby promoting increased flexibility and decreasing unhelpful automatic responses (e.g., rumination, worry, depression, urges to engage in weight control practices). Third, rather than avoiding thoughts and emotions, mindfulness encourages their constant observation and therefore may reduce distress and subsequent maladaptive behaviours via exposure, extinction, and new learning related to previous fear-based conditioned responses. Nevertheless, research is required to substantiate these proposed mechanisms in the specific context of body image and disordered eating.

<1>Intervention Concepts and Activities

Mindfulness-based interventions for body image aim to encourage the cultivation of: fuller awareness and engagement with the present, both mind and body; a decentred stance towards thoughts and feelings that might arise related to the body or eating in order to promote non-reactivity (i.e., observing one's thoughts and feelings as transient mental events); and an attitude of kindness, acceptance, non-judgement, and self-compassion towards one's self and body. As in established mindfulness interventions, namely Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1990) and Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2002), these concepts are introduced via formal and informal breathing and meditational exercises. For example, the "raisin exercise" guides participants to focus their full attention on eating a single raisin while observing each aspect of their experience (touch, sight, sound, smell, taste, sensations, thoughts, feelings) as if it were their first encounter. Another introductory exercise, the "3-minute breathing space," is a short meditative observation containing three steps: observing and acknowledging one's current experience, then focusing attention specifically on the breath, and finally expanding attention to include the whole body. These exercises aim to

highlight the power of present-moment attention to change the quality or nature of our experience, and offer a way to respond skillfully to difficult thoughts and feelings rather than react automatically.

Building on these foundational exercises, specific applications are then made to body image, including practicing mindful awareness and acceptance in the context of body-related activities (e.g., eating, walking, climbing stairs, exercising/sports, dancing, gardening, bathing), during guided visualisation of a feared or unpleasant body image scenario (imaginal exposure), and when being exposed to appearance-idealised media images and mirror reflections (in vivo exposure). Participants are also encouraged to use the 3-minute breathing space both as a set meditation, and as a coping strategy for when they notice negative thoughts or feelings about the body. Table 30.1 outlines the key themes and example activities of a brief 3-session mindfulness-based body image intervention conducted with small groups of young adult women with body image concerns (Atkinson & Wade, 2015).

<1>Research on Mindfulness for Body Image and Disordered Eating

In the domain of body image and disordered eating, research on mindfulness has used experimental methodology and focused on prevention and treatment of eating disorders.

<2>Experimental work related to body image and eating. Researchers, including our team, have conducted a range of experimental studies involving systematic manipulation of mindfulness processes in order to observe their effects on body- and eating-related thoughts, emotions, and behaviours in real-time (Godfrey, Gallo, & Afari, 2015), in both non-clinical and clinical samples. With respect to non-clinical samples, we conducted two studies that showed that brief mindfulness-based training in present-moment awareness and acceptance (5-10 minutes) produced an immediate improvement in state body satisfaction and negative mood (compared to a control) among female undergraduates who had been exposed to idealised magazine images (Atkinson & Wade, 2016; Wade, George, & Atkinson,

2009). A recent study among body dissatisfied female university students also indicated that 15-20 minutes of mindfulness-based acceptance training was beneficial in protecting against a reduction in body satisfaction and related distress following later media exposure, compared to control (Margolis & Orsillo, 2016). Further experimental research has evaluated practicing a state of mindfulness during mirror exposure, which involves deliberately and systematically viewing one's body reflected in the mirror. Delinsky and Wilson (2006) found improvements in weight and shape concerns, body satisfaction, and self-esteem after three 1-hour sessions of mindfulness-based mirror exposure among young adult women with weight and shape concerns. Interestingly, Luethcke, McDaniel, and Becker (2011) found that three sessions of mindfulness-based mirror exposure was effective in improving weight and shape concerns, eating pathology, and depression, but *not* body satisfaction, in a non-clinical sample of undergraduate females. This finding is perhaps consistent with the idea that mindfulness targets unhelpful *reactions* to internal experiences (e.g., over-evaluation, negative mood, urge to binge/restrict), but does not necessarily change those experiences directly (e.g., negative body evaluation). Finally, studies related to food exposure have found mindfulness to be more effective than distraction in reducing negative affect in a non-clinical sample of women (Marek, Ben-Porath, Federici, Wisniewski, & Warren, 2013), and in reducing high caloric food intake among undergraduate men and women, which was mediated by greater eating enjoyment (Arch et al., 2016).

Only a handful of experimental studies have investigated how mindfulness induction influences the response to stressor tasks related to body image and disordered eating in clinical samples. Two studies have assessed mindfulness in the context of eating. Among women with a history of anorexia nervosa and experiencing current eating disorder psychopathology, practicing mindfulness prior to a meal resulted in greater experiential self-focus (present-moment awareness of the whole experience during eating, including the body,

as opposed to an analytical or ruminative focus) in those who were partially weight-restored, whereas other participants reported aversive experiences (Cowdrey, Stewart, Roberts, & Park, 2013). A second study showed that women with a diagnosed eating disorder who completed a brief mindful eating exercise reported increased negative affect after the intervention (Marek et al., 2013). For those with significant eating pathology, paying full attention may actually serve to exacerbate perceived negative sensations (e.g., feeling of fullness, bloating, anxiety) and unintentionally increase the difficulty associated with eating, at least initially. Other work has examined the impact of mindful acceptance practice after exposure to pictures of thin models in clinical samples. Such practice had no effect on women with binge eating disorder in one study (Svaldi & Naumann, 2014), and improved body dissatisfaction in women with bulimia nervosa, but not anorexia nervosa, in a follow-up study (Naumann, Tuschen-Caffier, Voderholzer, Schafer, & Svaldi, 2016). Overall, the pattern of findings suggests a differential effect depending on clinical status, with mindfulness having neutral or negative effects on outcome variables in clinical samples (Marek et al., 2013; Svaldi & Naumann, 2014), and a neutral or positive effect in non-clinical samples (Atkinson & Wade, 2012; Marek et al., 2013; Wade et al., 2009). Further research is required to elucidate what stage of concerns would be most appropriate to introduce mindfulness, and what aspects of mindfulness may be most beneficial at each stage.

While the above research shows the potential usefulness of mindfulness in targeting negative body image concerns and mood, relatively little experimental work has assessed the impact of mindfulness for promoting positive body image and embodiment specifically. An initial study that we conducted with a non-clinical sample of female undergraduates indicated that a brief mindfulness intervention (15 minute in-laboratory session plus practice over 1 week) significantly increased body appreciation compared to an educational control (video documentary) after 1 week (Atkinson & Diedrichs, 2017). This mindfulness intervention also

buffered against the negative effects of later media exposure (i.e., higher state weight satisfaction, and lower internalisation of appearance ideals and perceived appearance pressures compared to control); however, there was no effect of the intervention on body-related psychological flexibility. These findings show preliminary support for mindfulness in specifically increasing body appreciation; however, more research is needed to validate these findings and to investigate the impact of mindfulness on additional aspects of positive body image (e.g., broad conceptualisation of beauty, self-care, intuitive eating) and embodiment (e.g., attuned sexuality, attuned self-care), as well as to determine whether this operates in a different way compared to reducing negative concerns.

<2>Prevention of eating disorders. In the context of prevention, mindfulness-based interventions are designed to provide training of a range of mindfulness skills in order to prevent the development of a broad range of clinical concerns and disorders, including poor body image and eating disorders, and we argue here, also enhance positive body image and embodiment. The current state of mindfulness research with regard to prevention is a new field dominated by uncontrolled trials. Comparison of mindfulness interventions to control conditions in schools has yielded mixed results. A recent meta-analysis of 76 studies of mindfulness-based interventions with youth indicated small effect sizes overall across a range of outcomes, with smaller effects found in more rigorously designed studies, although larger effects were observed at follow-up (Klingbeil et al., 2017).

Targeted mindfulness-based interventions (e.g., incorporating a range of key mindfulness concepts and activities with a specific application) have also been evaluated with respect to body image and eating disorder prevention (for an overview of concepts related to body image, see Stewart, 2004). We developed a 3-session mindfulness-based intervention specifically targeting risk factors for eating disorders (*“The Mindfulness Mode,”* outlined in Table 30.1), and conducted a preliminary randomised controlled trial delivered in a face-to-

face small-group format with a high-risk sample of older adolescent and young adult women experiencing body image concerns (Atkinson & Wade, 2016). The intervention resulted in post-intervention improvements in weight and shape concerns, dietary restraint, thin-ideal internalisation, eating disorder symptoms, and related psychosocial impairment with large effect sizes relative to control. However, these effects were not maintained at 6-month follow-up, reflecting the importance of continued mindfulness practices. In addition, we observed very limited voluntary interest and uptake into the study. This is an obstacle for broad dissemination, with a follow-up study indicating that, along with time and scheduling difficulty, discussing sensitive issues with others in a group setting was a significant deterrent to participation (Atkinson & Wade, 2013).

In a second study, we adapted the 3-session mindfulness-based intervention for classroom delivery as one approach to circumventing barriers to uptake, and evaluated its effectiveness among adolescent girls across all levels of risk and with a range of facilitators (Atkinson & Wade, 2015). No significant intervention effects were observed overall; however, under expert facilitation (several years of mindfulness experience and familiarity with the intervention), significant improvements were observed in weight and shape concerns, dietary restraint, thin-ideal internalisation, eating disorder symptoms, and related psychosocial impairment relative to control with medium effect sizes. Significant effects emerged only at 6-month follow-up, highlighting the potential for sleeper effects as a result of continued mindfulness practice. This finding is contrasted with evaluations of a general mindfulness-based program delivered in a school setting, which found no effects on weight and shape concerns at post-intervention or follow-up under expert facilitation (Johnson, Burke, Brinkman, & Wade, 2016). Thus, the specific application to body image as part of the intervention content may be a crucial element in conferring benefit in the context of universal prevention with adolescents.

It still remains to be explored whether eating disorder prevention efforts based on mindfulness do in fact enhance positive body image as we might expect. While not framed as an eating disorder prevention approach, Albertson, Neff, and Dill-Shackleford (2015) evaluated a mindfulness-based self-compassion intervention (3 weeks of daily meditations) among women with clinical levels of body image concerns. Participants showed an increase in body appreciation, alongside reductions in body dissatisfaction, body shame, and contingent self-worth based on appearance. These findings are encouraging, and underline the value in further investigating whether mindfulness-based interventions impact positive body image and embodiment, and how this relates to any reductions in risk and/or symptomatology in the specific context of eating disorders. This could inform intervention optimisation to include a greater focus on positive aspects, for maximised impact.

<2>Treatment of eating disorders. Robust evidence exists in adults for the benefits of specific mindfulness-based interventions, such as MBSR and MBCT, for the treatment of anxiety and depression (especially of a recurrent nature) with moderate effect sizes (Khouri et al., 2013). Mindfulness-based interventions are being increasingly utilised in the treatment of eating disorder symptoms in both clinical and nonclinical populations, and studies examining the use of mindfulness with disordered eating are increasing rapidly. In 2011, a systematic review of the area identified eight studies (Wanden-Berghe, Sanz-Valero, & Wanden-Berghe, 2011), and a systematic review of MBCT in 2013 identified 16 studies across all eating disorders (Masuda & Hill, 2013). In 2014, a systematic review identified 14 eligible studies across binge eating, emotional eating, and weight loss (Katterman, Kleinman, Hood, Nackers, & Corsica, 2014), and in 2015, a meta-analysis was conducted on 19 studies related to binge eating only (Godfrey et al., 2015).

Of the studies examined in the 2015 meta-analysis, 53% delivered mindfulness as one of several techniques within the broader therapeutic framework of Acceptance and

Commitment Therapy (ACT; $n = 4$) or Dialectical Behaviour Therapy (DBT; $n = 6$). Despite preliminary evidence for the effectiveness of these therapies, including reducing eating disorder symptomatology in patients with anorexia nervosa, bulimia nervosa, and binge eating disorder, research delineating the unique contribution of mindfulness is required to specifically inform our understanding of the usefulness of mindfulness for disordered eating.

While a number of studies ($n = 10$) have examined mindfulness-focused interventions for binge eating (including bulimia nervosa), only three of these studies compared the intervention to a control or comparison condition (see Table 30.2). In a randomized controlled study, Kristeller, Wolever, and Sheets (2014) found comparable results between Mindfulness-Based Eating Awareness Training (MB-EAT), designed specifically to treat eating disorders, and a psychoeducational/cognitive-behavioural intervention (PECB) in changing binge eating frequency and severity. Both intervention groups showed significant improvements compared with a wait-list control group. Second, in a non-randomized controlled study, Smith et al. (2008) found only an insignificant reduction in binge eating between an MBSR group as compared with a cognitive-behavioural stress reduction group. Third, in a non-randomized controlled study, Pinto-Gouveia et al. (2017) found large positive effect sizes on binge eating between BEfree, a psychological program based on psychoeducation, mindfulness, and self-compassion, and a wait list control group.

In summary, the main focus of outcome evaluation studies on mindfulness as a treatment approach has been on binge eating. Apart from the incorporation of mindfulness within larger interventions such as ACT or DBT, there is very little evidence to suggest that mindfulness *per se* can be used to treat disordered eating, or indeed binge eating, given the lack of controlled comparison trials. Those studies that do exist suggest that there may be promise in this approach for binge eating, but more comparisons to active conditions are required; further studies may also help identify who may benefit most from a mindfulness

approach. Finally, as noted above, it is also clear that there is a need to assess mindfulness-based eating disorder treatments with respect to improvements in positive body image more specifically, in addition to reducing negative body image and eating disorder symptoms.

<1>Conclusions: Considerations for Mindfulness Training and Future Research

Overall, initial evidence across experimental, prevention, and treatment studies of mindfulness indicates some potential for this approach in improving body image and disordered eating. However, we present a number of caveats that require careful consideration prior to implementation. In both clinical and non-clinical populations, the importance of an appropriate level of facilitator familiarity and experience with both mindfulness and intervention delivery cannot be understated. In addition, it is vital to emphasise the importance of time spent practicing and incorporating mindfulness into one's day-to-day experience, particularly ongoing use after intensive intervention periods (e.g., framed as a "lifestyle" skill), as this appears to be necessary for continued benefits.

With regard to non-clinical populations, targeted application of mindfulness skills to body image concerns and triggers, rather than general mindfulness skills training, may be required (e.g., when delivered to adolescents in the school classroom towards universal prevention). Regarding high-risk and clinical populations, practicing mindfulness may result in negative effects among those with more severe eating pathology, thereby affecting treatment outcome. Experienced therapists may be able to mitigate such adverse effects. Our studies also suggest that young women with negative body image may be uncomfortable with face-to-face group delivery, suggesting the potential usefulness of online delivery modes.

Based on our review, we outline a number of areas for future research regarding the implementation of mindfulness training aimed at enhancing positive body image and intuitive eating while reducing engagement in disordered eating patterns. Specifically, we need further work to determine: (a) the specific impact of mindfulness training on positive body image

and embodiment by including relevant measures in outcome trials; (b) the extent to which mindfulness can promote intuitive eating given that mindfulness may work by increasing awareness of internal cues specific to eating (i.e., hunger and satiety); (c) optimal delivery characteristics such as level of facilitator training, session duration and dosage necessary for benefits; (d) effectiveness in younger adolescents and in males, as currently we only have evidence of efficacy in older adolescent and young adult females (>15 years); and (e) the feasibility of online delivery modes to facilitate broader access. Further work is also necessary to isolate and assess a broader range of mindfulness skills with clinical samples, in order to provide recommendations regarding its use in these populations and guard against potential iatrogenic effects. In addition, despite finding initial positive effects, we still have limited understanding regarding the specific processes by which mindfulness exerts such benefits; research studies using meditational and dismantling designs could therefore help in refining mindfulness-based interventions for body image, intuitive eating, and disordered eating. Finally, as always, there is still a need for larger randomised controlled trials including alternative comparison interventions and adequate long-term follow-up to provide firmer evidence for the usefulness of mindfulness for body image and eating behaviours.

References

- Albertson, E. R., Neff, K. D., & Dill-Shackleford, K. E. (2015). Self-compassion and body dissatisfaction in women: A randomized controlled trial of a brief meditation intervention. *Mindfulness*, 6, 444-454. doi:10.1007/s12671-014-0277-3
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, 30, 217-237. doi:10.1016/j.cpr.2009.11.004
- Arch, J. J., Brown, K. W., Goodman, R. J., Della Porta, M. D., Kiken, L. G., & Tillman, S. (2016). Enjoying food without caloric cost: The impact of brief mindfulness on

laboratory eating outcomes. *Behaviour Research and Therapy*, 79, 23-34.

doi:10.1016/j.brat.2016.02.002

Atkinson, M. J., & Diedrichs, P. C. (2017). *Brief cognitive interventions for improving positive body image and resilience to media exposure in young adult females*.

Manuscript in preparation.

Atkinson, M. J., & Wade, T. D. (2012). Impact of metacognitive acceptance on body dissatisfaction and negative affect: Engagement and efficacy. *Journal of Consulting and Clinical Psychology*, 80, 416-425. doi:10.1037/a0028263

Atkinson, M. J., & Wade, T. D. (2013). Enhancing dissemination in selective eating disorders prevention: An investigation of voluntary participation among female university students. *Behaviour Research and Therapy*, 51, 806-816.

doi:10.1016/j.brat.2013.09.012

Atkinson, M. J., & Wade, T. D. (2015). Mindfulness-based prevention for eating disorders: A school-based cluster randomized controlled study. *International Journal of Eating Disorders*, 48, 1024-1037. doi:10.1002/eat.22416

Atkinson, M. J., & Wade, T. D. (2016). Does mindfulness have potential in eating disorders prevention? A preliminary controlled trial with young adult women. *Early Intervention in Psychiatry*, 10, 234-245. doi:10.1111/eip.12160

Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice*, 10, 125-143.

doi:10.1093/clipsy.bpg015

Cowdrey, F. A., Stewart, A., Roberts, J., & Park, R. J. (2013). Rumination and modes of processing around meal times in women with anorexia nervosa: qualitative and quantitative results from a pilot study. *European Eating Disorders Review*, 21, 411-419.

- Delinsky, S. S., & Wilson, G. T. (2006). Mirror exposure for the treatment of body image disturbance. *International Journal of Eating Disorders*, 39, 108-116.
doi:10.1002/eat.20207
- Godfrey, K. M., Gallo, L. C., & Afari, N. (2015). Mindfulness-based interventions for binge eating: A systematic review and meta-analysis. *Journal of Behavioral Medicine*, 38, 348-362. doi:10.1007/s10865-014-9610-5
- Jacobi, C., & Fittig, E. (2010). Psychosocial risk factors for eating disorders. In W. S. Agras (Ed.), *The Oxford handbook of eating disorders* (pp. 123-136). London: Oxford University Press.
- Johnson, C., Burke, C., Brinkman, S., & Wade, T. (2016). Effectiveness of a school-based mindfulness program for transdiagnostic prevention in young adolescents. *Behaviour Research and Therapy*, 81, 1-11. doi:10.1016/j.brat.2016.03.002
- Kabat-Zinn, J. (1990). *Full catastrophe living: The program of the stress reduction clinic at the University of Massachusetts Medical Center*. New York: Delta.
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, 10, 144-156. doi:10.1093/clipsy.bpg016
- Katterman, S. N., Kleinman, B. M., Hood, M. M., Nackers, L. M., & Corsica, J. A. (2014). Mindful meditation as an intervention for binge eating, emotional eating, and weight loss: A systematic review. *Eating Behaviors*, 15, 197-204.
doi:10.1016/j.eatbeh.2014.01.005
- Keng, S.-L., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological health: A review of empirical studies. *Clinical Psychology Review*, 31, 1041-1056.
doi:10.1016/j.cpr.2011.04.006
- Khoury, B., Lecomte, T., Fortin, G., Masse, M., Therien, P., Bouchard, V., . . . & Hofmann, S. G. (2013). Mindfulness-based therapy: A comprehensive meta-analysis. *Clinical*

Psychology Review, 33, 763-771. doi:10.1016/j.cpr.2013.05.005

Klingbeil, D. A., Renshaw, T. L., Willenbrink, J. B., Copek, R. A., Chan, K. T., . . . & Clifton, J. (2017). Mindfulness-based interventions with youth: A comprehensive meta-analysis of group-design studies. *Journal of School Psychology*, 63, 77-103. doi:10.1016/j.jsp.2017.03.006

Kristeller, J., Wolever, R. Q., & Sheets, V. (2014). Mindfulness-Based Eating Awareness Training (MB-EAT) for binge eating: A randomized clinical trial. *Mindfulness*, 5, 282-297. doi:10.1007/s12671-012-0179-1

Luethcke, C. A., McDaniel, L., & Becker, C. B. (2011). A comparison of mindfulness, nonjudgmental, and cognitive dissonance-based approaches to mirror exposure. *Body Image*, 8, 251-258. doi:10.1016/j.bodyim.2011.03.006

Marek, R. J., Ben-Porath, D. D., Federici, A., Wisniewski, L., & Warren, M. (2013). Targeting premeal anxiety in eating disordered clients and normal controls: A preliminary investigation into the use of mindful eating vs. distraction during food exposure. *International Journal of Eating Disorders*, 46, 582-585. doi:10.1002/eat.22152

Margolis, S. E., & Orsillo, S. M. (2016). Acceptance and body dissatisfaction: Examining the efficacy of a brief acceptance based intervention for body dissatisfaction in college women. *Behavioural and Cognitive Psychotherapy*, 44, 482-492. doi:10.1017/S1352465816000072

Masuda, A., & Hill, M. L. (2013). Mindfulness as therapy for disordered eating: A systematic review. *Neuropsychiatry*, 3, 433-447. doi:10.2217/NPY.13.36

Naumann, E., Tuschen-Caffier, B., Voderholzer, U., Schafer, J., & Svaldi, J. (2016). Effects of emotional acceptance and rumination on media-induced body dissatisfaction in anorexia and bulimia nervosa. *Journal of Psychiatric Research*, 82, 119-125.

doi:10.1016/j.jpsychires.2016.07.021

Pinto-Gouveia, J., Carvalho, S. A., Palmeira, L., Castilho, P., Duarte, C., Ferreira, C., . . .

Costa, J. (2017). BEfree: A new psychological program for binge eating that integrates psychoeducation, mindfulness, and compassion. *Clinical Psychology & Psychotherapy*, 24, 1090-1098. doi:10.1002/cpp.2072

Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2012). *Mindfulness-based cognitive therapy for depression* (2nd ed.). New York: Guilford.

Smith, B. W., Shelley, B. M., Dalen, J., Wiggins, K., Tooley, E., & Bernard, J. (2008). A pilot study comparing the effects of mindfulness-based and cognitive-behavioral stress reduction. *Journal of Alternative Complementary Medicine*, 14, 251-258. doi:10.1089/acm.2007.0641

Stewart, T. M. (2004). Light on body image treatment: Acceptance through mindfulness. *Behavior Modification*, 28, 783-811. doi:10.1177/0145445503259862

Svaldi, J., & Naumann, E. (2014). Effects of rumination and acceptance on body dissatisfaction in binge eating disorder. *European Eating Disorders Review*, 22, 338-345. doi:10.1002/erv.2312

Teasdale, J. D., Segal, Z. V., & Williams, M. G. (1995). How does cognitive therapy prevent depressive relapse and why should attentional control (mindfulness) training help? *Behaviour Research and Therapy*, 33, 25-39. doi:10.1016/0005-7967(94)E0011-7

Wade, T., George, W. M., & Atkinson, M. (2009). A randomized controlled trial of brief interventions for body dissatisfaction. *Journal of Consulting and Clinical Psychology*, 77, 845-854. doi:10.1037/a0016879

Wanden-Berghe, R. G., Sanz-Valero, J., & Wanden-Berghe, C. (2010). The application of mindfulness to eating disorders treatment: A systematic review. *Eating Disorders*, 19, 34-48. doi:10.1080/10640266.2011.533604

Table 30.1. *Overview of a Brief 3-Session Group-Based Mindfulness Intervention for Body Image* (Atkinson & Wade, 2015, 2016)

Overview	Example exercises
<i>Session 1: Introduction to mindfulness and present-moment awareness</i>	
Non-judgement awareness and acceptance framed as an alternative way of coping with distressing or unwanted body-related thoughts and feelings, in contrast to common strategies of avoidance and rumination. Mindfulness defined and present-moment awareness introduced and practiced in session.	<ul style="list-style-type: none"> - Pink elephant thought suppression and magnification exercises (to highlight unintended negative consequences of avoidance and rumination, respectively, and provide rationale for mindfulness as alternative) - Raisin Exercise (mindful eating), as described above - Brief mindfulness of breathing (10 minutes) <p><i>Homework:</i></p> <ul style="list-style-type: none"> - Identify personal coping strategies and associated costs - The 3-minute breathing space (3MBS, as described above) - Mindfulness while undertaking a routine task
<i>Session 2: A new way of relating to experience</i>	
Introduction to the idea that thoughts and feelings are just mental events that can be acknowledged and allowed to pass by. Participants practise decentring from and observing thoughts in the context of negative self-evaluations, exposure to idealised magazine images, and while recalling and visualising a recent personal negative body image experience.	<ul style="list-style-type: none"> - Decentring thought exercise (e.g., comparing the difference between “<i>I am having the thought that I am fat</i>” vs “<i>I am fat</i>”) - Practising mindfulness stance while viewing idealised media images - Role-play decentred and accepting attitude with example negative or critical comments <p><i>Homework:</i></p> <ul style="list-style-type: none"> - 3MBS, particularly in response to distress - Mindfulness while undertaking a useful or pleasant body experience - Read “The Guest House” poem by Jelaluddin Rumi
<i>Session 3: Cultivating non-judgement and self-compassion</i>	
Introduced to concept of being welcoming of all experiences, both negative and positive. The downsides to body-related judgement and self-criticism are discussed, and non-judgement and self-compassion practised. Participants discuss future events likely to exacerbate body image concerns, and how they could use what they had learned in the program effectively.	<ul style="list-style-type: none"> - Reading and reflecting on The Guest House poem - Brainstorming compassionate and accepting responses to self-critical body-related thoughts - Practising mindfulness while visualising a scenario in which they commonly experienced body-related concern <p><i>Homework:</i></p> <ul style="list-style-type: none"> - Continue practise of the 3MBS - Generate a Top-5 list of non-judgemental statements to use when they observe self-critical thoughts - Mindfulness mirror exposure

Table 30.2. *Studies Examining Comparisons of a Mindfulness-Only Treatment for Binge Eating to Another Condition*

Authors (year)	Sample	Treatment and group size	Comparison group and size	Between group effect sizes (Cohen's <i>d</i>) and 95% Confidence Intervals
Kristeller et al. (2014)	<i>N</i> = 150 men and women classified as overweight/obese; 111 met DSM-IV or DSM-5 binge eating disorder (BED) criteria, mean age 46.6, mean BMI 40.3, 12% male, 13% minority ethnicity	MB-EAT (<i>n</i> = 53); group treatment, 9 weekly sessions followed by 3 monthly booster sessions PECB (<i>n</i> = 50); group treatment, 9 weekly sessions followed by 3 monthly booster sessions	Wait list (<i>n</i> = 47)	<i>OBE days post-treatment</i> 1.13 (0.69-1.57); 0.93 (0.51-1.35) <i>OBE days follow-up</i> 1.03 (0.60-1.47); 0.70 (0.29-1.11) <i>Binge Eating Scale post-treatment</i> 1.26 (0.81-1.70); 0.83 (0.41-1.24) <i>Binge Eating Scale follow-up</i> 1.41 (0.96-1.87); 1.06 (0.64-1.49)
Smith et al. (2008)	<i>N</i> = 50; community sample signing up for stress reduction (inclusion criteria did not include BMI or binge eating), mean age 47.8, mean BMI 27.9, 25% male	MBSR (<i>n</i> = 36); group treatment, 8 weekly sessions and a one day retreat	CBSR (<i>n</i> = 14); group treatment, 8 weekly sessions	<i>Binge Eating Scale post-treatment</i> 0.52 (-0.10-1.15)
Pinto-Gouveia et al. (2017)	<i>N</i> = 36; women with BED, mean age 42, mean BMI 35	BEfree (<i>n</i> = 19); group treatment, 12 sessions conducted by psychologists	Wait list (<i>n</i> = 17)	<i>Binge Eating Scale post-treatment</i> 1.73 (0.97-2.50)

Note. BMI = body mass index; MB-EAT = Mindfulness-Based Eating Awareness Training; MBSR = Mindfulness Based Stress Reduction; CBSR = Cognitive-Behavioural Stress Reduction. PECB = Psychoeducational/cognitive-behavioural; OBE = Objective Binge Episodes. BEfree is a cognitive behaviour therapy approach incorporating psychoeducation, values clarification, acceptance, mindfulness, and committed action. PECB and the findings for this program are bolded to set them apart from MB-EAT and its findings.